

1/24

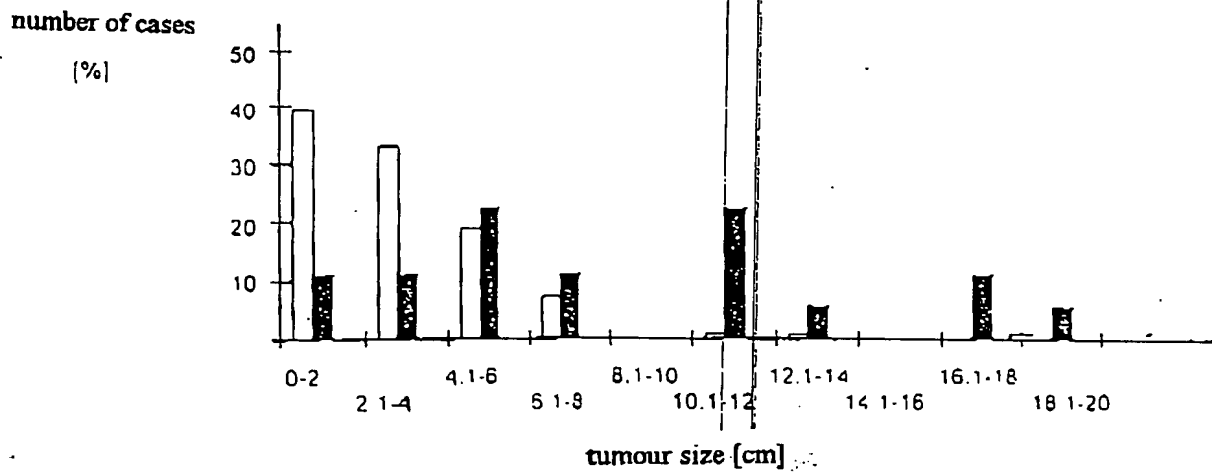
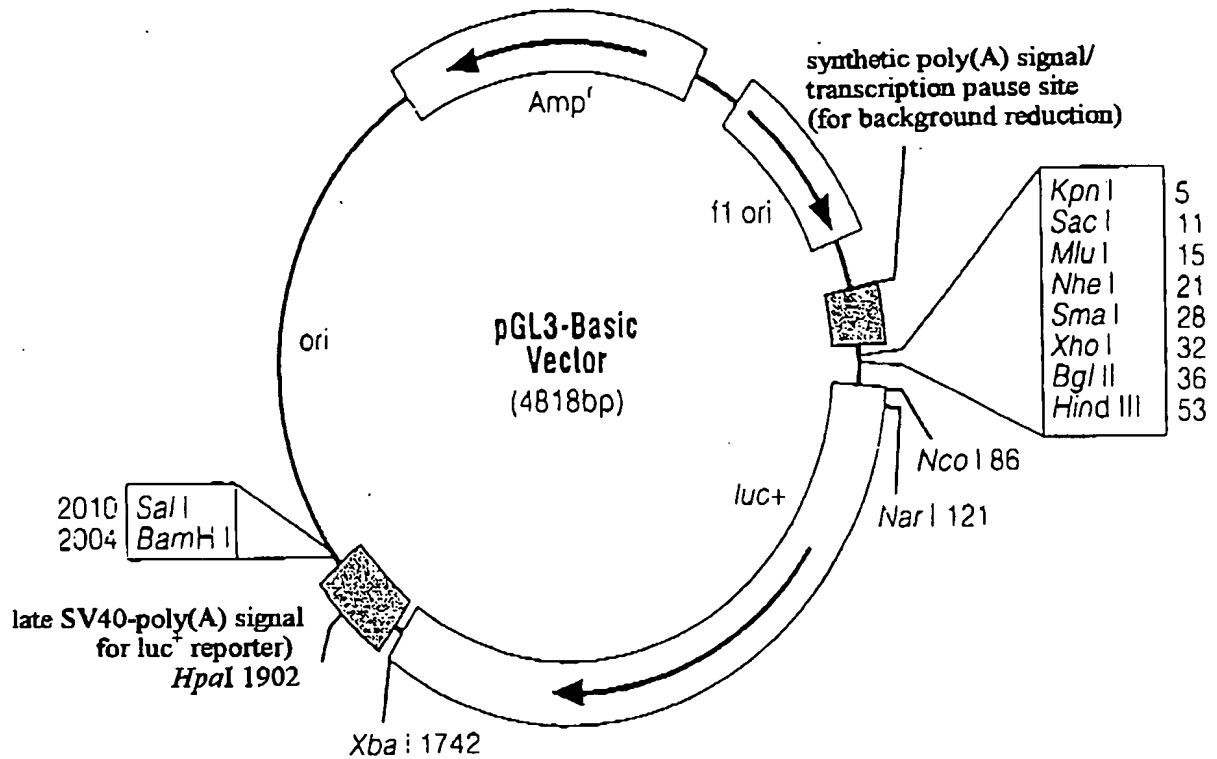


Fig. 1

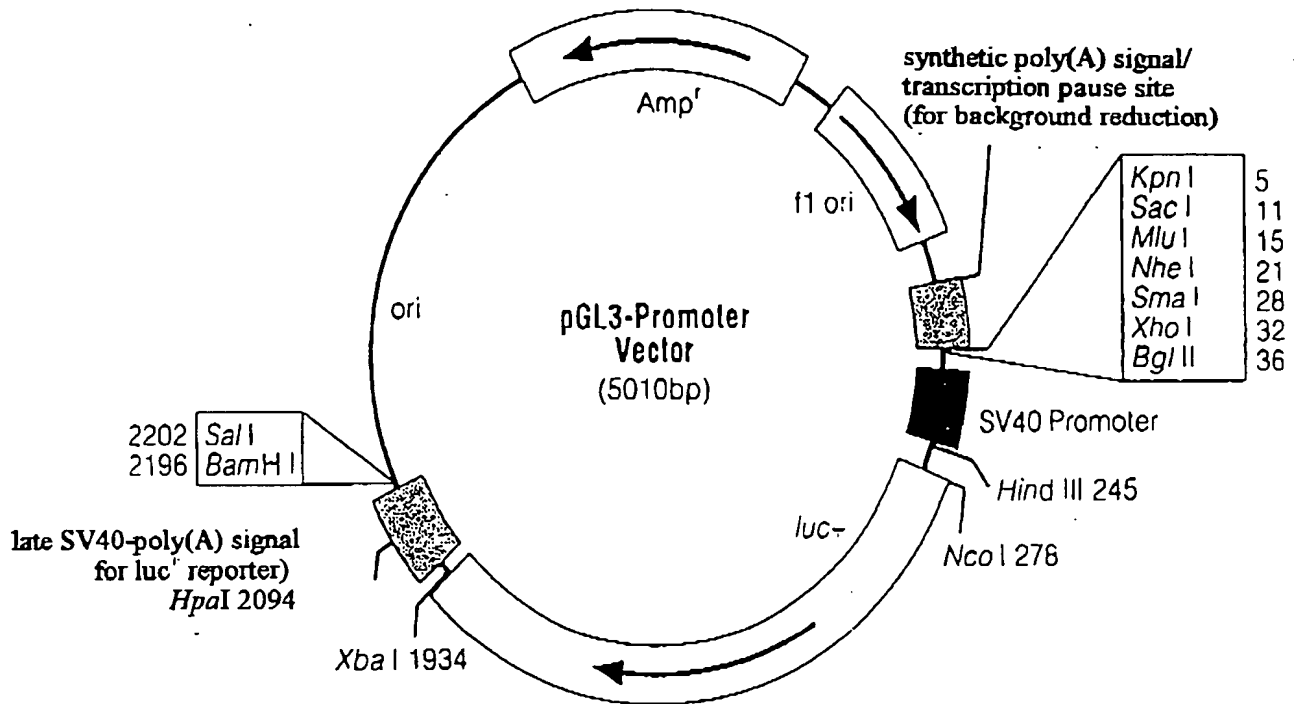
2/24



pGL3-Basic Vector map.

Fig. 2 - part 1

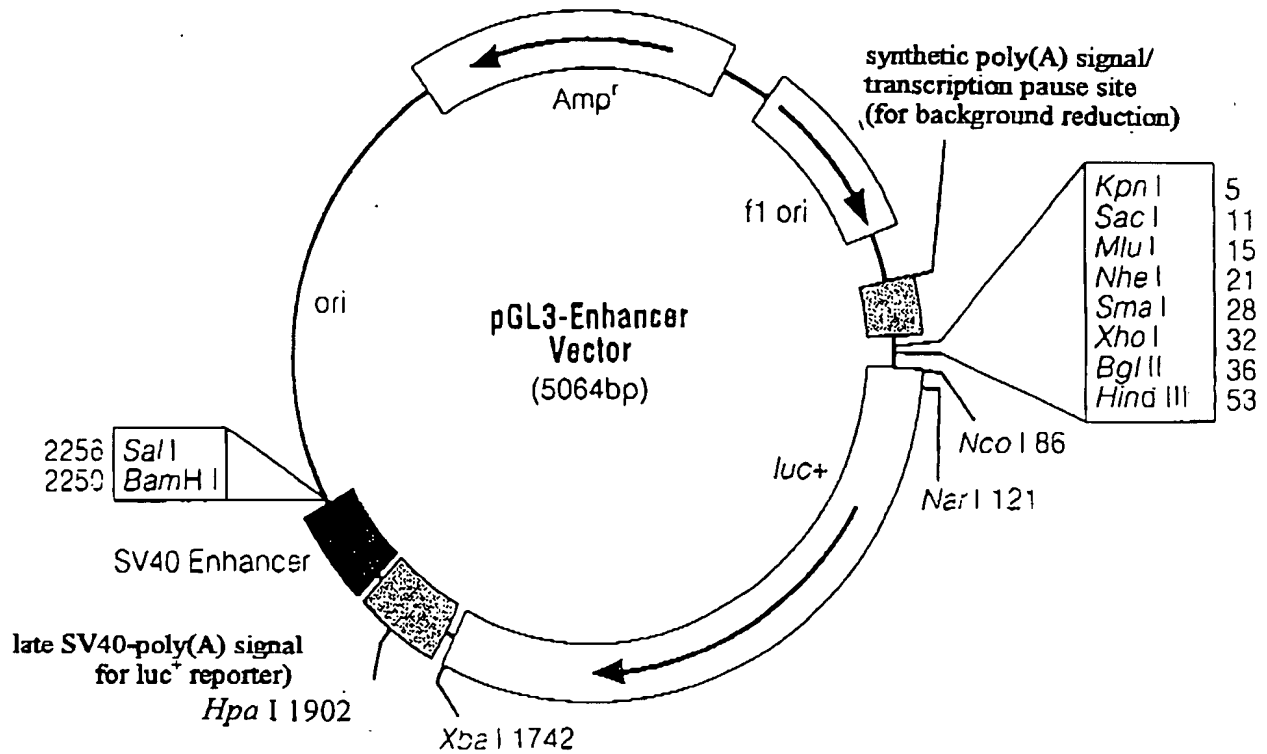
3/24



pGL3-Promoter Vector map.

Fig. 2 - part 2

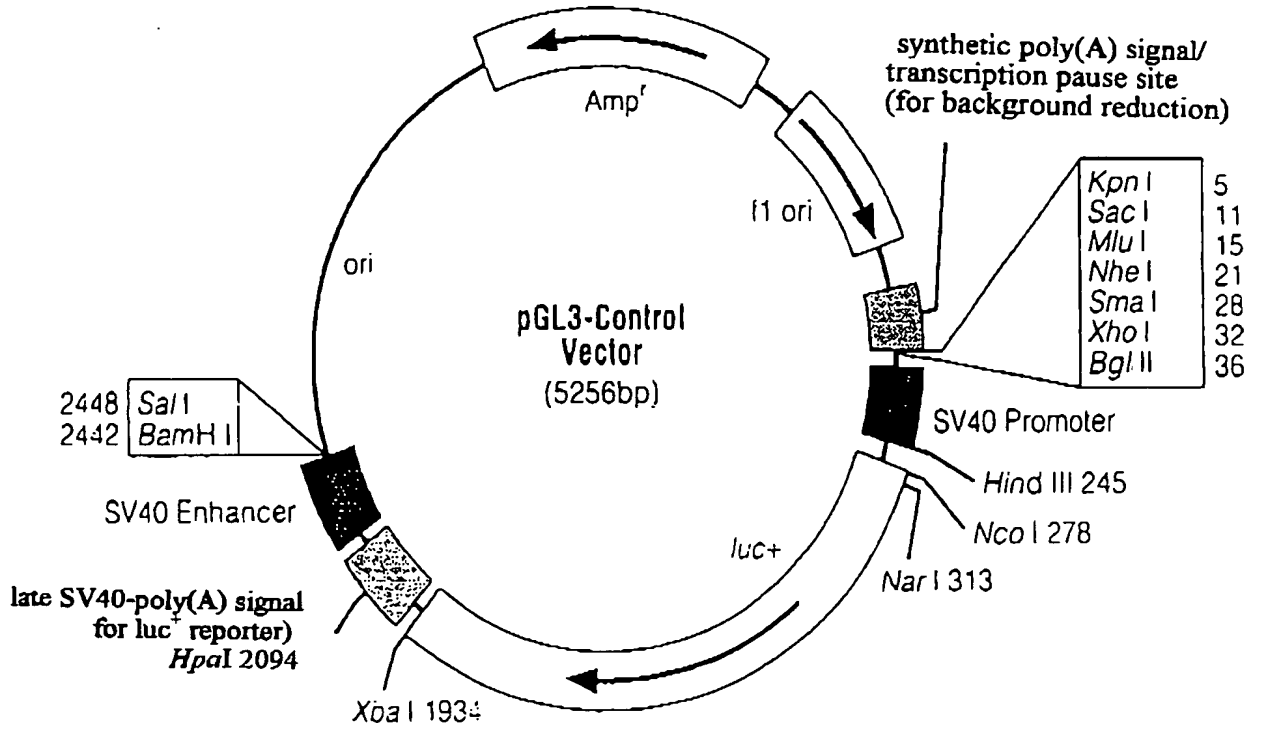
4/24



pGL3-Enhancer Vector map.

Fig. 2 - part 3

5/24



pGL3-Control Vector map.

Fig. 2 - part 4

6/24

1 GGCACCTTTTACCTTAACCACTTTCAAG	X765551Ko.seq
1 GGCACCTTTTACCTTAACCACTTTCAAG	M2-3s.seq
1 GGCACCTT[C]TACCTTAACCACTTTCAAG	M7-1s.seq
1 GGCACCTT[C]TACCTTAACCACTTTCAAG	M8-2s.seq
31 AAGGTCTCCATCATGTTTGACTCCTCAGTC	X765551Ko.seq
31 AAGGTCTCCATCATGTTTGACTCCTCAGTC	M2-3s.seq
31 AAGGTCTCCATCATGTTTGACTCCTCAGTC	M7-1s.seq
31 AAGGTCTCCATCATGTTTGACTCCTCAGTC	M8-2s.seq
61 AGCTGGCCTGGCAATGACAGGCTGTTGAGC	X765551Ko.seq
61 AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M2-3s.seq
61 AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M7-1s.seq
61 AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M8-2s.seq
91 CCAAATGAGTTTGAAATCAAGCGCACTGTG	X765551Ko.seq
91 CCAAATGAGTTTGAAATCAAGCGCACTGTG	M2-3s.seq
91 CCAAATGAGTTTGAAATCAAGCGCACTGTG	M7-1s.seq
91 CCAAATGAGTTTGAAATCAAGCGCACTGTG	M8-2s.seq
121 GACGGGGGAAGGGTACAATGTGGCCCAATGT	X765551Ko.seq
121 GACGGGGGAAGGGTACAATGTGGCCCAATGT	M2-3s.seq
121 GACGGGGGAAGG[A]TACAA[C]GTGGC[A]CAATG[C]	M7-1s.seq
121 GACGGGGGAAGG[A]TACAA[C]GTGGC[A]CAATG[C]	M8-2s.seq
151 AACATGACCAGAAAGACTGGTTCCTGGTTCAG	X765551Ko.seq
151 AACATGACCAGAAAGACTGGTTCCTGGTTCAG	M2-3s.seq
151 AACATGACCAGAAAGACTGGTTCCT[A]GTTCAG	M7-1s.seq
151 AACATGACCAGAAAGACTGGTTCCT[A]GTTCAG	M8-2s.seq

Fig. 3a(a) - part 1

09/890684

7/24

181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	X765551Ko.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M2-3s.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M7-1s.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M8-2s.seq

211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	X765551Ko.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M2-3s.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M7-1s.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M8-2s.seq

241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	X765551Ko.seq
241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M2-3s.seq
241 C G C A T G T A C T C T T T T T T C A G A A A C T T C C A G	M7-1s.seq
241 C G C A T G T A C T C T T T T T T C A G A A A C T T C C A G	M8-2s.seq

271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	X765551Ko.seq
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M2-3s.seq
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M7-1s.seq
271 C C T A C G A G C A G G C A G G T G G T T G A T G A G G T T	M8-2s.seq

301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	X765551Ko.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M2-3s.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M7-1s.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M8-2s.seq

331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	X765551Ko.seq
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M2-3s.seq
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M7-1s.seq
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M8-2s.seq

Fig. 3a(a) - part 2

8/24

361 G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	X765551Ko.seq
361 G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	M2-3s.seq
361 G G G T A C C T T G C A C C T A C T A T G A G A C A A G G G	M7-1s.seq
361 G G G T A C C T T G C A C C T A C T A T G A G A C A A G G G	M8-2s.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	X765551Ko.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M2-3s.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M7-1s.seq
391 G A A C C T T A C C C G G C C A A T T A T C C A T A C C C G	M8-2s.seq
421 C T C A T C G G A A	X765551Ko.seq
421 C T C A T C G G A A	M2-3s.seq
421 C T C A T C G G A A	M7-1s.seq
421 C T C A T C G G A A	M8-2s.seq



sequence difference

Fig. 3a(a) - part 3

9/24

1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	X765551Prot.PRO
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M2-3s.PRO
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M7-1s.PRO
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M8-2s.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	X765551Prot.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M2-3s.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M7-1s.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M8-2s.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	X765551Prot.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M2-3s.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M7-1s.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M8-2s.PRO
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	X765551Prot.PRO
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M2-3s.PRO
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M7-1s.PRO
91 P T S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M8-2s.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	X765551Prot.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M2-3s.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M7-1s.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M8-2s.PRO



sequence difference

Fig. 3a(b)

10/24

1 G G C A C T T T T T A C C T T A A C C A C A C T T T C A A G	AF065068Ko.seq
1 G G C A C C T T T T A C C T T A A C C A C A C T T T C A A G	M6-1s.seq
31 A A G G T C T C C A T C A T G T T T G A C T C C T C A G T C	AF065068Ko.seq
31 A A G G T C T C C A T C A T G T T T G A C T C C T C A G T C	M6-1s.seq
61 A G C T G G C C T G G C A A T G A C A G G C T G T T G T C T	AF065068Ko.seq
61 A G C T G G C C T G G C A A T G A C A G G C T G T T G T C T	M6-1s.seq
91 C C A A A T G A G T T T G A A A T C A A G C G C A C T G T G	AF065068Ko.seq
91 C C A A A T G A G T T T G A A A T C A A G C G C A C T G T G	M6-1s.seq
121 G A T G G G G A A G G A T A C A A T G T G G C C C A A T G C	AF065068Ko.seq
121 G A T G G G G A A G G A T A C A A T G T G G C C C A A T G C	M6-1s.seq
151 A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	AF065068Ko.seq
151 A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	M6-1s.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	AF065068Ko.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M6-1s.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	AF065068Ko.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M6-1s.seq
241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	AF065068Ko.seq
241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M6-1s.seq
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	AF065068Ko.seq
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M6-1s.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	AF065068Ko.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M6-1s.seq

Fig. 3b(a) - part 1

11/24

331 C C A T A T C A A C A C A A C A A C T C T G G C T T T G T A	AF065068Ko.seq
331 C C A T A T C A A C A C A A C A A C T C T G G C T T T G T A	M6-1s.seq
361 G G A T A C C T T G C G C C T A C T A T G A G A C A A G G G	AF065068Ko.seq
361 G G A T A C C T T G C G C C T A C T A T G A G A C A A G G G	M6-1s.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	AF065068Ko.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M6-1s.seq
421 C T C A T C G G A A	AF065068Ko.seq
421 C T C A T C G G A A	M6-1s.seq

☐ sequence difference

Fig. 3b(a) - part 2

12/24

1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	AF065068Prot.PRO
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M6-1s.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	AF065068Prot.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M6-1s.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	AF065068Prot.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M6-1s.PRO
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	AF065068Prot.PRO
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M6-1s.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	AF065068Prot.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M6-1s.PRO

☐ sequence difference

Fig. 3b(b)

13/24

1 G G C A C C T T T T A C C T T A A C C A C A C T T T C A A G	AF065065Ko.seq
1 G G C A C C T T T T A C C T T A A C C A C A C T T T C A A G	M3.3P-2.SEQ
1 G G C A C C T T T T A C C T T A A C C A C A C T T T C A A G	M5-1s.seq
1 G G C A C C T T C T A C C T T A A C C A C A C T T T C A A G	M9-2s.seq
31 A A G G T C T C C A T C A T G T T T G A C T C C T C A G T C	AF065065Ko.seq
31 A A G G T C T C C A T C A T G T T T G A C T C C T C A G T C	M3.3P-2.SEQ
31 A A G G T C T C C A T C A T G T T T G A C T C C T C A G T C	M5-1s.seq
31 A A G G T C T C C A T C A T G T T T G A C T C C T C A G T C	M9-2s.seq
61 A G C T G G C C T G G C A A T G A C A G G C T G T T G A G C	AF065065Ko.seq
61 A G C T G G C C T G G C A A T G A C A G G C T G T T G A G C	M3.3P-2.SEQ
61 A G C T G G C C T G G C A A T G A C A G G C T G T T G A G C	M5-1s.seq
61 A G C T G G C C T G G C A A T G A C A G G C T G T T G A G C	M9-2s.seq
91 C C A A A T G A G T T T G A A A T C A A G C G C A C T G T G	AF065065Ko.seq
91 C C A A A T G A G T T T G A A A T C A A G C G C A C T G T G	M3.3P-2.SEQ
91 C C A A A T G A G T T T G A A A T C A A G C G C A C T G T G	M5-1s.seq
91 C C A A A T G A G T T T G A A A T C A A G C G C A C T G T G	M9-2s.seq
121 G A C G G G G A A G G G T A C A A T G T G G C C C A A T G T	AF065065Ko.seq
121 G A C G G G G A A G G G T A C A A T G T G G C C C A N N G T	M3.3P-2.SEQ
121 G A C G G G G A A G G G T A C A A T G T G G C C C A A T G T	M5-1s.seq
121 G A C G G G G A A G G A T A C A A C G T G G C A C A A T G C	M9-2s.seq
151 A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	AF065065Ko.seq
151 A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	M3.3P-2.SEQ
151 A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	M5-1s.seq
151 A A C A T G A C C A A A G A C T G G T T C C T A G T T C A G	M9-2s.seq

Fig. 3c(a) - part 1

14/24

181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	AF065065Ko.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M3.3P-2.SEQ
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M5-1s.seq
181 A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M9-2s.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	AF065065Ko.seq
211 G G C T T T T A C A T N C C T G A G G G A T A C A A G G A T	M3.3P-2.SEQ
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M5-1s.seq
211 G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M9-2s.seq
241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	AF065065Ko.seq
241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M3.3P-2.SEQ
241 C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M5-1s.seq
241 C G C A T G T A C T C T T T T T T C A G A A A C T T C C A G	M9-2s.seq
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	AF065065Ko.seq
271 C C T A T G A G C A G G C A G G T G G C T G A T G A G G N T	M3.3P-2.SEQ
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M5-1s.seq
271 C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M9-2s.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	AF065065Ko.seq
301 A A T T A C A C T G A C T A C A A A G C C G G C A C C T T A	M3.3P-2.SEQ
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M5-1s.seq
301 A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M9-2s.seq
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	AF065065Ko.seq
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M3.3P-2.SEQ
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M5-1s.seq
331 C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M9-2s.seq

Fig. 3c(a) - part 2

15/24

361 G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	AF065065Ko.seq
361 G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	M3.3P-2.SEQ
361 G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	M5-1s.seq
361 G G G T A <input type="checkbox"/> T T G C A C C T A C T A T G A G A C A A G G G	M9-2s.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	AF065065Ko.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M3.3P-2.SEQ
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M5-1s.seq
391 G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M9-2s.seq
421 C T C A T C G G A A	AF065065Ko.seq
421 C T C A T C G G A A	M3.3P-2.SEQ
421 C T C A T C G G A A	M5-1s.seq
421 C T C A T C G G A A	M9-2s.seq

☐ sequence difference

Fig. 3c(a) - part 3

16/24

1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	AF065065.pro
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M3-3p.pro
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M5-1s.PRO
1 G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M9-2s.PRO

31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	AF065065.pro
31 P N E F E I K R T V D G E G Y N V A X X N M T K D W F L V Q	M3-3p.pro
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M5-1s.PRO
31 P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M9-2s.PRO

61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	AF065065.pro
61 M L A N Y N I G Y Q G F Y X P E G Y K D R M Y S F F R N F Q	M3-3p.pro
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M5-1s.PRO
61 M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M9-2s.PRO

91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	AF065065.pro
91 P M S R Q V A D E X N Y T D Y K A G T L P Y Q H N N S G F V	M3-3p.pro
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M5-1s.PRO
91 P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M9-2s.PRO

121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	AF065065.pro
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M3-3p.pro
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M5-1s.PRO
121 G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M9-2s.PRO

☐ .sequence difference

Fig. 3c(b)

17/24

1. GGCACCTTTTACCTTAACCACACTTTTCAAG	M2-3s.seq
1. GGCACCTTTTACCTTAACCACACTTTTCAAG	M5-1s.seq
1. GGCACCTTTTACCTTAACCACACTTTTCAAG	M6-1s.seq
1. GGCACCTTTCACCTTAACCACACTTTTCAAG	M7-1s.seq
1. GGCACCTTTCACCTTAACCACACTTTTCAAG	M8-2s.seq
1. GGCACCTTTCACCTTAACCACACTTTTCAAG	M9-2s.seq
31. AAGGTCTCCATCATGTTTGACTCCTCAGTC	M2-3s.seq
31. AAGGTCTCCATCATGTTTGACTCCTCAGTC	M5-1s.seq
31. AAGGTCTCCATCATGTTTGACTCCTCAGTC	M6-1s.seq
31. AAGGTCTCCATCATGTTTGACTCCTCAGTC	M7-1s.seq
31. AAGGTCTCCATCATGTTTGACTCCTCAGTC	M8-2s.seq
31. AAGGTCTCCATCATGTTTGACTCCTCAGTC	M9-2s.seq
61. AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M2-3s.seq
61. AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M5-1s.seq
61. AGCTGGCCTGGCAATGACAGGCTGTTGAGCTCT	M6-1s.seq
61. AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M7-1s.seq
61. AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M8-2s.seq
61. AGCTGGCCTGGCAATGACAGGCTGTTGAGC	M9-2s.seq
91. CCAAATGAGTTTGAAATCAAGCGCACTGTG	M2-3s.seq
91. CCAAATGAGTTTGAAATCAAGCGCACTGTG	M5-1s.seq
91. CCAAATGAGTTTGAAATCAAGCGCACTGTG	M6-1s.seq
91. CCAAATGAGTTTGAAATCAAGCGCACTGTG	M7-1s.seq
91. CCAAATGAGTTTGAAATCAAGCGCACTGTG	M8-2s.seq
91. CCAAATGAGTTTGAAATCAAGCGCACTGTG	M9-2s.seq

Fig. 4a - part 1

18/24

121.	G A C G G G G A A G G G T A C A A T G T G G C C C A A T G T	M2-3s.seq
121.	G A C G G G G A A G G G T A C A A T G T G G C C C A A T G T	M5-1s.seq
121.	G A T G G G G A A G G A T A C A A T G T G G C C C A A T G C	M6-1s.seq
121.	G A C G G G G A A G G A T A C A A C G T G G C A C A A T G C	M7-1s.seq
121.	G A C G G G G A A G G A T A C A A C G T G G C A C A A T G C	M8-2s.seq
121.	G A C G G G G A A G G A T A C A A C G T G G C A C A A T G C	M9-2s.seq
151	A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	M2-3s.seq
151	A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	M5-1s.seq
151	A A C A T G A C C A A A G A C T G G T T C C T G G T T C A G	M6-1s.seq
151	A A C A T G A C C A A A G A C T G G T T C C T A G T T C A G	M7-1s.seq
151	A A C A T G A C C A A A G A C T G G T T C C T A G T T C A G	M8-2s.seq
151	A A C A T G A C C A A A G A C T G G T T C C T A G T T C A G	M9-2s.seq
181	A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M2-3s.seq
181	A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M5-1s.seq
181	A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M6-1s.seq
181	A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M7-1s.seq
181	A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M8-2s.seq
181	A T G C T T G C C A A C T A C A A C A T T G G C T A C C A G	M9-2s.seq
211	G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M2-3s.seq
211	G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M5-1s.seq
211	G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M6-1s.seq
211	G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M7-1s.seq
211	G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M8-2s.seq
211	G G C T T T T A C A T C C C T G A G G G A T A C A A G G A T	M9-2s.seq

Fig. 4a - part 2

19/24

241	C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M2-3s.seq
241	C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M5-1s.seq
241	C G C A T G T A C T C C T T T T T C A G A A A C T T C C A G	M6-1s.seq
241	C G C A T G T A C T C T T T T T T C A G A A A C T T C C A G	M7-1s.seq
241	C G C A T G T A C T C T T T T T T C A G A A A C T T C C A G	M8-2s.seq
241	C G C A T G T A C T C T T T T T T C A G A A A C T T C C A G	M9-2s.seq
271	C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M2-3s.seq
271	C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M5-1s.seq
271	C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M6-1s.seq
271	C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M7-1s.seq
271	C C T A C G A G C A G G C A G G T G G T T G A T G A G G T T	M8-2s.seq
271	C C T A T G A G C A G G C A G G T G G T T G A T G A G G T T	M9-2s.seq
301	A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M2-3s.seq
301	A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M5-1s.seq
301	A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M6-1s.seq
301	A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M7-1s.seq
301	A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M8-2s.seq
301	A A T T A C A C T G A C T A C A A A G C C G T C A C C T T A	M9-2s.seq
331	C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M2-3s.seq
331	C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M5-1s.seq
331	C C A T A T C A A C A C A A C A A C T C T G G C T T T G T A	M6-1s.seq
331	C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M7-1s.seq
331	C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M8-2s.seq
331	C C A T A C C A A C A C A A C A A C T C T G G C T T T G T A	M9-2s.seq

Fig. 4a - part 3

20/24

361	G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	M2-3s.seq
361	G G G T A T C T T G C A C C T A C T A T G A G A C A A G G G	M5-1s.seq
361	G G A T A C C T T G C G C C T A C T A T G A G A C A A G G G	M6-1s.seq
361	G G G T A C C T T G C A C C T A C T A T G A G A C A A G G G	M7-1s.seq
361	G G G T A C C T T G C A C C T A C T A T G A G A C A A G G G	M8-2s.seq
361	G G G T A C C T T G C A C C T A C T A T G A G A C A A G G G	M9-2s.seq
391	G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M2-3s.seq
391	G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M5-1s.seq
391	G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M6-1s.seq
391	G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M7-1s.seq
391	G A A C C T T A C C C G G C C A A T T A T C C A T A C C C G	M8-2s.seq
391	G A A C C T T A C C C A G C C A A T T A T C C A T A C C C G	M9-2s.seq
421	C T C A T C G G A A	M2-3s.seq
421	C T C A T C G G A A	M5-1s.seq
421	C T C A T C G G A A	M6-1s.seq
421	C T C A T C G G A A	M7-1s.seq
421	C T C A T C G G A A	M8-2s.seq
421	C T C A T C G G A A	M9-2s.seq

sequence difference

Fig. 4a - part 4

21/24

1	G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M2-3s.PRO
1	G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M5-1s.PRO
1	G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M6-1s.PRO
1	G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M7-1s.PRO
1	G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M8-2s.PRO
1	G T F Y L N H T F K K V S I M F D S S V S W P G N D R L L S	M9-2s.PRO
31	P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M2-3s.PRO
31	P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M5-1s.PRO
31	P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M6-1s.PRO
31	P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M7-1s.PRO
31	P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M8-2s.PRO
31	P N E F E I K R T V D G E G Y N V A Q C N M T K D W F L V Q	M9-2s.PRO
61	M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M2-3s.PRO
61	M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M5-1s.PRO
61	M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M6-1s.PRO
61	M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M7-1s.PRO
61	M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M8-2s.PRO
61	M L A N Y N I G Y Q G F Y I P E G Y K D R M Y S F F R N F Q	M9-2s.PRO
91	P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M2-3s.PRO
91	P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M5-1s.PRO
91	P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M6-1s.PRO
91	P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M7-1s.PRO
91	P T S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M8-2s.PRO
91	P M S R Q V V D E V N Y T D Y K A V T L P Y Q H N N S G F V	M9-2s.PRO

Fig. 4b - part 1

22/24

121	G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M2-3s.PRO
121	G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M5-1s.PRO
121	G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M6-1s.PRO
121	G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M7-1s.PRO
121	G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M8-2s.PRO
121	G Y L A P T M R Q G E P Y P A N Y P Y P L I G	M9-2s.PRO

☐ sequence difference

Fig. 4b - part 2

23/24

ADE1BgI2S

1 ctcicctatat aatatacctt atagatggaa tggtagcaac atgtaaaiga ggttaatttaa
61 aaaagtgcgc gctgtgtggt gattggctgt ggggtgaatg actaacatgg gcggggcggc
121 cgtgggaaaa tgacgtgact tatgtgggag gaggatgtt gcaagttatt gcggtaaatg
181 tgacgaaaaa ggaggtgtgg ttggaacacg gaagtggaca gtttcccaac gcttactgat
241 aggatatgag gtagttttgg gcggatgcaa gtgaacattc tccattttcg cgcgaanaact
301 gaatgoggaa gtgaatttct gattcatttc gcggtaatga cagggtggag tatttgccga
361 gggccgagta gactitgacc gtttacgtgg aggtttcgat taccgtgttt ttccactaaa
421 tticcgcgta cgggtgtcaa gtccgtgtgt tttacgtgaa tatcaactaa tcgctoggg
481 atitaaacct gacgogttcc gtcaagaggc cactcttgag igccagcgag aagagttttc
541 tcctccgcgc cgaagtacg ttctgcgctt tgccatgag acccctgcgc ticctgccac
601 aggagattat ctccagttag accgggatcg aatcctgga gtttgtggt aataccctaa
661 tgggogacga cccggaaccg ccagtgcagc ctitgatcc acctacgtg cagatctgt

Fig. 5

24/24

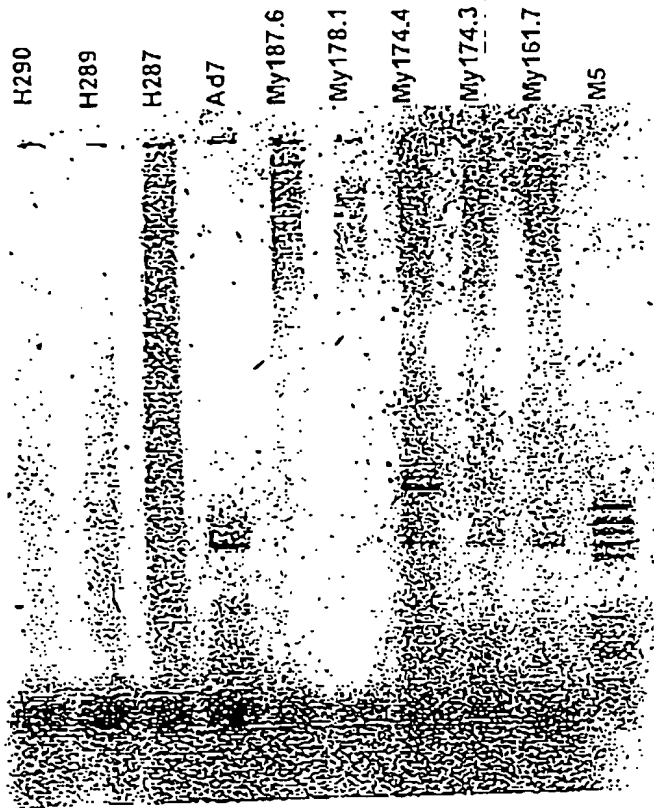


Fig. 6

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.